

## IN THE SPECIFICATION

Please amend the Paragraphs [0002], [0003], [0008], [0012], [0031], [0043], [0068], [0079], [0093] and [0100] as shown below, in which deleted terms are shown with strikethrough and/or double brackets, and added terms are shown with underscoring. Also, please amend the Title and delete the heading appearing above the Title as shown below.

Title and Heading Appearing above the Title

### Description

~~Retroreflective function member and retroreflective unit~~

## RETROREFLECTIVE FUNCTION MEMBER AND RETROREFLECTIVE UNIT

Paragraph [0002]      There is a micro-glass sphere type retroreflective function member and a cube corner type retroreflective function member in a retroreflective function ~~member~~unit.

Paragraph [0003]      Known for providing the micro-glass sphere type retroreflective function members are technology whereby glass beads are mixed with road traffic paint with the help of the glass beads' (lens) own retroreflective ability, a reflective cloth in which one surface of base cloth is provided with a paint layer containing glass beads semi-embedded in the paint layer, or a reflective sheet in which one surface of a transparent resin plate in which glass beads are embedded is provided with an adhesive layer (refer to Non-Patent Document 1).

Paragraph [0008]      Still further, another conventional technology is known in which a device

is fixed to a guard rail member and adapted to fall down when coming in contact with a vehicle body, thereby expanding the area of the effective retroreflective surface (refer to Patent Document 5).

{Non-Patent Document 1} \_Pages 168 - 171 of a dictionary of glass (issued on September 20, 1985 by Asakura Bookstore);

{Patent Document 1} \_Japanese Unexamined Patent Publication No. Hei 11-508653 (508653/1999), FIG. 4 and the related figures of the Publication;

{Patent Document 2} \_Japanese Unexamined Patent Publication No. 2000-075115;

{Patent Document 3} \_Description of Japanese Unexamined Patent Publication No. Hei 8-234006 (234006/1996) in [0003] ~ [0005];

{Patent Document 4} \_International Application No. WO98-18028;

{Patent Document 5} \_Japanese Unexamined Patent Publication No. 2002-146729.

Paragraph [0012] As shown in the Non-Patent Document 1, a focus position of the glass bead of which the refractive index is 1.5 can conduct the retroreflection most efficiently by bringing the reflective surface to a position where it is 1.38 times as long as the hemisphere (R) of the bead. In this connection, in case of the glass bead of which the refractive index is 1.93, it is most efficient to make the bead surface the reflective surface.

Paragraph [0031] A working principle of the retroreflective function member with the above structure will now be described. First, as shown in FIG. 1 (a) which is a side view of which the intermediate part is omitted, the vertical retroreflection is conducted in such a manner that light

incident on the front surface 6 of a lens body goes straight through the lens body after refraction, reflects on a reflective surface of the rear surface 7 of the lens body, and is emitted from the front surface 6 of the lens body as reflected light. In this case, if the reflective surface is situated near a focal position of the incident light, for example, when the curvature radius of the front surface 6 is  $R_1$  viewed from the side, a curvature radius of the rear surface 7 is  $R_2$  viewed from the side, and  $R_2 / R_1 \doteq 2.0$ , all the reflected light is retroreflecting in the incident direction. By changing the value of  $R_2 / R_1$ , the flux of retroreflected light in the vertical direction is narrowed or widened. Further, the refractive index of a medium (i.e., a transparent body) on which the light is incident varies with the wavelength of the incident light (A normal refraction index has an intermediate value). Incident angles of the light with blue components and the light with red components to the medium differ depending on the difference in the refractive index even though this is the light incident at the same incident height, and the reflected light on the rear surface also changes. Taking this into consideration, a reducing angle of the light flux in the vertical direction has been calculated using the acrylic resin ( $n = 1.49$ ) (refer to Table 1).

Paragraph [0043] FIG. 1 (a) is a side view explaining the retroreflective condition of a retroreflective unit according to the present invention and FIG. 1 (b) is a plan view explaining the retroreflective condition of the retroreflective unit;

Paragraph [0068] A retroreflective function member 1 is formed by injection molding the transparent acrylic resin and is substantially plate-shaped, in which the upper surface 2, the lower surface 3, and right and left side surfaces 4 and 5 are formed flat. The front surface 6 is the incident

(incoming) and outgoing surface, the rear surface 7 is aluminum-deposited to serve as a ~~reflected~~ reflecting surface, and the outside of the rear surface 7 is protected by a resin 8.

Paragraph [0079] FIGS. 6 (a) - (c) show ~~[[a]]~~ plan views of ~~[[a]]~~ retroreflective units in which the lens body of the above shape is incorporated. The lens ~~body~~ bodies as shown in FIGS. 5(a) - (c) are ~~[[is]]~~ designed to most efficiently retroreflect the incident light at an angle of 35° relative to a perpendicular line of the front surface 6. The most efficient angle is determined by the refractive index of the lens body and the ratio of the width and the length thereof.

Paragraph [0093] FIG. 12 is a plan view showing the inner structure of the studs and FIG. 13 is a cross-sectional view of the studs shown in FIG. 12. The studs 50 comprise a casing 51 made of aluminum die cast, a leg section 52 provided on the casing 51 and adapted to be embedded in the road, eaves 53 formed by extending part of the casing 51, and a transparent lens box 55 secured to the lower surface of the eaves 53 via a shim 54. Housed within the lens box 55 is a plurality of lens units 11 (6 pieces) via a fastening member 56.

Paragraph [0100] FIG. 19 is a plan view showing the inner structure of the studs according to another embodiment. FIG. 20 is a front elevation view of the studs as shown in FIG. 19 and FIG. 21 is a side view of the studs as shown in FIG. 19. In this embodiment, a transparent lens box 55 housing the lens units 11 is installed in the casing 51 of a frustum of a cone shape made of aluminum die cast. The lens box 55 is formed substantially fan-shaped and a section 55a of the front surface serving as the incident surface is made flat to reduce the influence of refractive index.